

In the claims:

29. A heat pump system, comprising:
two units in fluid communication with each other, each
unit including:

a housing, an air/brine heat exchanger, a
brine/refrigerant heat exchanger, brine inlet means for
applying brine onto at least one of said heat exchangers, a
brine reservoir and means for circulating said brine from
the reservoir to said inlet means;

said brine/refrigerant heat exchangers of said units
being in closed loop fluid communication with each other
and having compressor means for circulating a refrigerant
therethrough in selected directions, and

means for circulating brine between said reservoirs,
wherein said means for circulating the brine between
said reservoirs are adapted to circulate brine at a lower
rate than the rate of circulation of the brine between said
reservoirs and said brine inlet means.

30. heat pump system, comprising:
two units in fluid communication with each other, each
unit including:

a housing, brine inlet means at the top portion
thereof, a first heat exchanger located adjacent said brine

inlet means, a brine reservoir at the lower part of said housing, and means for introducing air into brine-dripping space delimited between said first heat exchanger and said reservoir, and

a second heat exchanger in liquid communication with said brine inlet means and said reservoir;

said second heat exchangers being in closed loop fluid communication with each other and having compressor means for circulating a refrigerant therethrough in selected directions, and

means for circulating brine between said reservoir and said second heat exchanger of each unit,

and means for circulating brine between said reservoirs,

wherein said means for circulating the brine between said reservoirs are adapted to circulate brine at a lower rate than the rate of circulation of the brine between said reservoirs and said second heat exchanger of each unit.

31. The heat pump system as claimed in claim 29, wherein the reservoirs of each unit are in liquid communication with each other.

Please cancel claim 32 without prejudice.

33. (Amended) The heat pump system as claimed in claim 30, further comprising a third heat exchanger affixed on brine circulating pipes, interconnecting said reservoirs.

Please cancel claim 34 without prejudice.

Please cancel claim 35 without prejudice.

c/ 36. The heat pump system as claimed in claim 33, wherein at least said unit and said second and third heat exchangers are made of materials non-corrosive to brine.

37. The heat pump system as claimed in claim 30, further comprising a throttle valve affixed to a refrigerant-carrying pipe interconnecting said second heat exchangers.

38. The heat pump system as claimed in claim 29, wherein at least one of said reservoirs is further provided with water inlet means for adding water to the brine.

39. The heat pump system as claimed in claim 29,
further comprising ambient air heating means for heating
the ambient air prior to the introduction thereof into said
housing.

40. The heat pump system as claimed in claim 39,
wherein said heating means is a water/air heat exchanger.

41. The heat pump system as claimed in claim 29,
further comprising an external humidity source for adding
humidity to ambient air introducible into said housing.

42. The heat pump system as claimed in claim 41,
wherein said humidity source is a plant.

43. A method for air conditioning, comprising:
providing a heat pump system as claimed in claim 29 and
further including a refrigerant evaporator and a
refrigerant condenser, wherein the refrigerant evaporator
and the refrigerant condenser exchange heat with brine
solution, whereby the temperature of condensation of said
refrigerant is reduced while the temperature of said
evaporator is raised, thereby increasing the efficiency of
the system.

44. The method as claimed in claim 43, wherein said air/brine heat exchanger is thermally associated with said refrigerant evaporator.

45. The method as claimed in claim 43, wherein said air/brine heat exchanger is thermally associated with said refrigerant condenser.

Please cancel claim 46 without prejudice.

Please cancel claim 47 without prejudice.

48. dehumidifier system comprising:

a dehumidifying chamber into which moist air is introduced and from which less moist air is removed after dehumidification;

a desiccant solution situated in two reservoirs;

a first conduit via which desiccant solution is transferred from a first reservoir of said two reservoirs to the dehumidifying chamber, said solution being returned to said first reservoir after absorbing moisture from the moist air;

a regenerator which receives desiccant solution from a second reservoir of said two reservoirs and removes moisture from it;

a second conduit via which desiccant is transferred
from said second reservoir to the regenerator, said
solution being returned to said second reservoir after
moisture is removed from it;

a heat pump that transfers heat from the solution in
the first conduit to the solution in the second conduit,
and

means for circulating desiccant solution between said
reservoirs,

wherein said means for circulating the desiccant
between said reservoirs are adapted to circulate desiccant
at a lower rate than the rate of transfer of said desiccant
from said reservoirs to at least one of said dehumidifying
chamber and said regenerator.

49. A dehumidifier system comprising:

a dehumidifying chamber into which moist air is
introduced and from which less moist air is removed after
dehumidification;

a desiccant solution situated in a first reservoir;
a first conduit via which desiccant solution is
transferred from the first reservoir to the dehumidifying
chamber, said solution being returned to said first
reservoir after absorbing moisture from the moist air;

a desiccant solution situated in a second reservoir;
a regenerator which receives desiccant solution from
the second reservoir and removes moisture from it;
a second conduit via which desiccant is transferred
from the second reservoir to the regenerator, said solution
being returned to said second reservoir after moisture is
removed from it; and
means for circulating desiccant solution between said
reservoirs,
wherein a substantial temperature differential is
maintained between the first and second reservoirs, and
wherein said means for circulating the desiccant
between said reservoirs are adapted to circulate desiccant
at a lower rate than the rate of circulation of the
desiccant between said reservoirs and at least one of said
dehumidifying chamber and said regenerator.

Please add new claims 50-52 as follows:

50. A method for air conditioning, comprising:
providing a heat pump system as claimed in claim 30
and further including a refrigerant evaporator and a
refrigerant condenser, wherein the refrigerant evaporator
and the refrigerant condenser exchange heat with brine

solution, whereby the temperature of condensation of said
refrigerant is reduced while the temperature of said
evaporator is raised, thereby increasing the efficiency of
the system.

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51. The method as claimed in claim 50, wherein said
first heat exchanger is thermally associated with said
refrigerant evaporator.

52. The method as claimed in claim 50, wherein said
first heat exchanger is thermally associated with said
refrigerant condenser.